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BARBERRY ERADICATION IN NORTH DAKOTA

Black stem rust of grain is caused by a fungus which bears the long scientific name of Puccinia graminis. This fungus is a minute, mold-like plant. It must live on other plants and for this reason it is called a parasite. The plant upon which it grows is called its host. Black stem rust has two hosts, the common barberry and grain or grasses. It lives for part of the year on the barberry and partly on grains and grasses.

Stem rust appears on the leaves of barberries in North Dakota in May and June. It spreads during the next two or three weeks from the infected barberries to grains and grasses near by. Epidemics may be produced in near-by grain fields, and the summer stage of stem rust may continue to spread throughout the summer if conditions are favorable.

Some infected barberries have been found spreading rust throughout each summer month. The complete life story of black stem rust is told in Farmers' Bulletin 1058.

Black stem rust has caused enormous losses of small grains. The average annual loss from stem rust in the United States from 1916 to 1924, inclusive, has been about 50,000,000 bushels of wheat alone. The total losses reported from 1915 to 1924, inclusive, for the 13 States in the barberry-eradication area were 486,589,000 bushels of all small grains. The total losses for North Dakota from 1915 to 1924, inclusive, were about 178,023,000 bushels of wheat, 10,942,000 bushels of oats, 3,042,000 bushels of barley, and 464,000 bushels of rye. These losses, totaling 192,471,000 bushels of small grains, give an average annual loss of about 19,247,100 bushels of all grains in North Dakota alone.

A State law prohibiting the growing of common barberries in North Dakota became effective March 15, 1917. Nurserymen and property owners who have had common barberry bushes have cooperated so readily in destroying them that enforcement of the law has not been necessary.

Black stem rust can not infect any shrubs or bushes except certain species, varieties, and hybrids of barberries. Of these the common barberry is the principal one. All harmful barberries should be destroyed, however. A few kinds of barberries do not become infected with stem rust. The more widely spread of these is the Japanese barberry, which is harmless. The Japanese barberry should not be destroyed.

In the seven years from 1918 to 1924, inclusive, there have been found in North Dakota 22,145 common barberry bushes on 835 properties. In addition, there have been found 156 seedlings, and, on the reinspection of bushes that were cut off or dug, 1,170 sprouting bushes were found and destroyed.

Your cooperation in finding and insuring the eradication of every remaining harmful barberry bush, seedling, or sprout is essential for the protection of the small grain crops of the State and the Nation. When you find common barberry bushes report them, with the name and address of the owner of the property upon which they are found, either to your county agricultural agent, the State College of Agriculture, Agricultural College, N. Dak., or to the Bureau of Plant Industry, United States Department of Agriculture, Washington, D. C.

